

ABSTRACT OF THE DISCLOSURE

A ball grid array package semiconductor device having improved power line routing. The BGA package semiconductor device includes a semiconductor chip having a plurality of pads along its center, a substrate having a slot of a predetermined size along its center, and a signal line plane including a signal line pattern and a plurality of ball mounts on its one side, with the semiconductor chip being mounted on the other side. A bonding material is inserted between the semiconductor chip and the substrate to fix the semiconductor chip to the substrate. A plurality of balls are mounted on the plurality of ball mounts to be connected to an external circuit. The signal line plane is divided into two or more signal line planes including a first line plane and a second line plane. Lines for the first power are formed only on the first signal line plane, and lines for the second power are formed only on the second signal line plane.